UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,281	08/30/2001	Fred S. Cook	1494	8810

				EXAMINER
28004	7590	02/07/2006		DAVIS, CYNTHIA L

SPRINT
6391 SPRINT PARKWAY
KSOPHT0101-Z2100
OVERLAND PARK, KS 66251-2100

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/943,281	COOK, FRED S.
	Examiner	Art Unit	
	Cynthia L. Davis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>08 December 2005</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is

closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-55* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All   b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage

application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot
in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can
be found in a prior Office action.

1.   Claims 1-2, 4, 6-8, 11, 13-14, 16, 18-20, and 23 are rejected under 35 U.S.C.
103(a) as being unpatentable over Voit in view of Burns.

Regarding claim 1, a service provider is disclosed in Voit, column 2, line 14. A
first user communication device configured to communicate with the service provider
over a first link is disclosed in column 5, lines 4 (the ITG). A second user
communication device configured to communicate with the service provider over a
second link, determine a need for additional bandwidth and transmit a request for the
additional bandwidth, receive an instruction message responsive to the request that
grants the second user communication device access to available bandwidth on the first
link, and communicate with the service provider over a third link and the first link at the
available bandwidth wherein the third link connects the second user communication
device and the first user communication device is disclosed in column 6, line 56-column
7, line 3 (the end client communication device sends a request to the ISP to start a call,
i.e., to receive bandwidth; receives authorization from the ISP, which gives the client
device the requested bandwidth; and then connects to the appropriate ITG). The

second link not including the first user communication device and the first link not

including the second user communication device is missing from Voit. However, Burns

discloses in figure 6 and column 11, line 61-column 12, line 13, a network with the

claimed structure (the first device in the content server 52, the first link is the link

between the content server and the ISP 56, the second device is the subscriber PC 58,

the second link is the link via the secondary network 202 from the content server 52 to

the PC 58, and the third link is the link between the subscriber PC and the ISP). It

would have been obvious to one skilled in the art at the time of the invention to use the

structure of Burns in the system of Voit. The motivation would be to afford

supplemental bandwidth for the delivery of content (Burns, column 12, lines 6-7).

Regarding claim 13, in a first user communication device, communicating with a

service provider over a first link is disclosed in Voit, column 2, line 14 (disclosing an

ISP) and column 5, line 4 (the ITG is connected to the ISP). In a second user

communication device communicating with the service provider over a second link,

determining a need for additional bandwidth and transmitting a request for the additional

bandwidth, receiving an instruction message responsive to the request that grants the

second communication device access to available bandwidth of the first link, and

communicating with the service provider over a third link and the first link at the

available bandwidth wherein the third link connects the second user communication

device and the first user communication device is disclosed in column 6, line 56-column

7, line 3 (the end client communication device sends a request to the ISP to start a call,

i.e., to receive bandwidth; receives authorization from the ISP, which gives the client

device the requested bandwidth; and then connects to the appropriate ITG). The second link not including the first user communication device and the first link not including the second user communication device is missing from Voit. However, Burns discloses in figure 6 and column 11, line 61-column 12, line 13, a network with the claimed structure (the first device in the content server 52, the first link is the link between the content server and the ISP 56, the second device is the subscriber PC 58, the second link is the link via the secondary network 202 from the content server 52 to the PC 58, and the third link is the link between the subscriber PC and the ISP). It would have been obvious to one skilled in the art at the time of the invention to use the structure of Burns in the system of Voit. The motivation would be to afford supplemental bandwidth for the delivery of content (Burns, column 12, lines 6-7).

Regarding claim 25, a software product for use in a communication system that provides bandwidth sharing is disclosed in Voit, column 8, lines 46-49 (the system is implemented in software). An ISP is disclosed in column 2, line 14. A first communication device is disclosed in column 5, line 4 (the ITG is connected to the ISP). Bandwidth sharing software configured when executed by a processing system in the second user communication system to determine a need for additional bandwidth and transmit a request for the additional bandwidth, receive an instruction message responsive to the request that grants the second user communication device access to available bandwidth on the first link, and communicate with the service provider over a third link and the first link at the available bandwidth wherein the third link connects the second user communication device and the first user communication device, and

storage media configured to store the bandwidth sharing software is disclosed in

column 6, line 56-column 7, line 3 (the end client communication device sends a

request to the ISP to start a call, i.e., to receive bandwidth; receives authorization from

the ISP, which gives the client device the requested bandwidth; and then connects to

the appropriate ITG). The second link not including the first user communication device

and the first link not including the second user communication device is missing from

Voit. However, Burns discloses in figure 6 and column 11, line 61-column 12, line 13, a

network with the claimed structure (the first device in the content server 52, the first link

is the link between the content server and the ISP 56, the second device is the

subscriber PC 58, the second link is the link via the secondary network 202 from the

content server 52 to the PC 58, and the third link is the link between the subscriber PC

and the ISP). It would have been obvious to one skilled in the art at the time of the

invention to use the structure of Burns in the system of Voit. The motivation would be to

afford supplemental bandwidth for the delivery of content (Burns, column 12, lines 6-7).

Regarding claims 2, 14, and 26, the second user communication device is further

configured to establish the third link with the first user communication device responsive

to the reply message is disclosed in column 6, lines 63-65 (when the bandwidth for the

call is granted, the client device connects to the ITG).

Regarding claims 4, 16, and 28, the third link comprises a wire line link is

disclosed in figure 1 of Voit.

Regarding claims 6 and 18 the first user communication device is further

configured to: determine the available bandwidth of the first link and indicate the

available bandwidth to the second user communication device is disclosed in column 5, lines 35-43 (the ITG lets the ISP know what bandwidth resources it has available, and notifies the client device via the ISP).

Regarding claims 7 and 19, the first user communication device is further configured to: determine the available bandwidth of the first link and indicate the available bandwidth to the service provider in Voit, column 5, lines 35-38.

Regarding claims 8 and 20, the first user communication device is further configured to generate a link sharing contract for the available bandwidth of the first link that specifies a type of link access to the first link is disclosed in column 5, lines 63-65 (the ITG negotiates a billing algorithm with the client at the time of connection).

Regarding claims 11 and 23, the service provider is configured to bill the second user communication device based on the link sharing contract is disclosed in column 6, lines 18-21.

2.   Claims 5, 17, 29-31, 33, 35-37, 40, 42-43, 45, 47-49, 52, and 54-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Burns in further view of Pasternak.

Regarding claims 5, 17, and 29, the third link comprises a wireless link is missing from Voit. However, Pasternak discloses in figure 1 a wireless network. It would have been obvious to one skilled in the art at the time of the invention to have the third link be wireless. The motivation would be to use a common, convenient type of connection.

Regarding claim 30, a first user communication device configured to communicate with a service provider over a first link is disclosed in column 5, line 4 (the

ITG is connected to the ISP). A second user communication device configured to

communicate with a service provider over a second link is disclosed in column 6, lines

56-57 (disclosing the client device communicating with the ISP). The second user

communication device further configured to receive the instruction message and

communicate with the service provider over a third link and the first link at the available

bandwidth responsive to the instruction message wherein the third link connects the

second user communication device and the first user communication device is disclosed

in Voit, column 6, lines 61-column 7- line 3 (the client device receives permission to

start the call, and connects to the ITG). A service provider configured to determine a

need to provide additional bandwidth to the second user communication device,

determine available bandwidth on the first link, generate and transmit an instruction

message responsive to the determination of the available bandwidth on the first link that

grants the second user communication device access to the available bandwidth on the

first link is missing from Voit. However, Pasternak discloses in column 2, lines 56-57, a

request-less scheduler that allocates bandwidth to client devices based on both the

available and needed bandwidth of the system. It would have been obvious to one

skilled in the art at the time of the invention to use request-less scheduling in the system

of Voit. The motivation would be to be able to be able to allocate more bandwidth to a

call on the fly without using up bandwidth for request messages. The second link not

including the first user communication device and the first link not including the second

user communication device is missing from Voit. However, Burns discloses in figure 6

and column 11, line 61-column 12, line 13, a network with the claimed structure (the first

device in the content server 52, the first link is the link between the content server and

the ISP 56, the second device is the subscriber PC 58, the second link is the link via the

secondary network 202 from the content server 52 to the PC 58, and the third link is the

link between the subscriber PC and the ISP). It would have been obvious to one skilled

in the art at the time of the invention to use the structure of Burns in the system of Voit.

The motivation would be to afford supplemental bandwidth for the delivery of content

(Burns, column 12, lines 6-7).

Regarding claim 42, in a first user communication device, communicating with a

service provider over a first link is disclosed in Voit, column 5, line 4 (the ITG is

connected to the ISP). In a second user communication device, communicating with

the service provider over a second link is disclosed in column 6, lines 56-57 (disclosing

the client device communicating with the ISP). In the second user communication

device, receiving the instruction message and communicating with the service provider

over a third link and the first link at the available bandwidth responsive to the instruction

message wherein the third link connects the second user communication device and the

first user communication device is disclosed in Voit, column 6, lines 61-column 7- line 3

(the client device receives permission to start the call, and connects to the ITG). In the

service provider, determining a need to provide additional bandwidth to the second user

communication device, determine available bandwidth on the first link, generating and

transmitting an instruction message responsive to the determination of the available

bandwidth on the first link that grants the second user communication device access to

the available bandwidth on the first link is missing from Voit. However, Pasternak

discloses in column 2, lines 56-57, a request-less scheduler that allocates bandwidth to client devices based on both the available and needed bandwidth of the system. It would have been obvious to one skilled in the art at the time of the invention to use request-less scheduling in the system of Voit. The motivation would be to be able to be able to allocate more bandwidth to a call on the fly without using up bandwidth for request messages. The second link not including the first user communication device and the first link not including the second user communication device is missing from Voit. However, Burns discloses in figure 6 and column 11, line 61-column 12, line 13, a network with the claimed structure (the first device in the content server 52, the first link is the link between the content server and the ISP 56, the second device is the subscriber PC 58, the second link is the link via the secondary network 202 from the content server 52 to the PC 58, and the third link is the link between the subscriber PC and the ISP). It would have been obvious to one skilled in the art at the time of the invention to use the structure of Burns in the system of Voit. The motivation would be to afford supplemental bandwidth for the delivery of content (Burns, column 12, lines 6-7).

Regarding claim 54, a software product for use in a communication system that provides bandwidth sharing is disclosed in Voit, column 8, lines 46-49 (the system is implemented in software). An ISP is disclosed in column 2, line 14. A first communication device is disclosed in column 5, line 4 (the ITG is connected to the ISP). Bandwidth sharing software configured when executed by a processing system in the service provider to determine a need to provide additional bandwidth to the second user communication device, determine available bandwidth on the first link, generate and

transmit an instruction message responsive to the determination of the available

bandwidth on the first link that grants the second user communication device access to

the available bandwidth on the first link, and storage media configured to store

bandwidth sharing software is missing from Voit. However, Pasternak discloses in

column 2, lines 56-57, a request-less scheduler that allocates bandwidth to client

devices based on both the available and needed bandwidth of the system. It would

have been obvious to one skilled in the art at the time of the invention to use request-

less scheduling in the system of Voit. The motivation would be to be able to be able to

allocate more bandwidth to a call on the fly without using up bandwidth for request

messages. The second link not including the first user communication device and the

first link not including the second user communication device is missing from Voit.

However, Burns discloses in figure 6 and column 11, line 61-column 12, line 13, a

network with the claimed structure (the first device in the content server 52, the first link

is the link between the content server and the ISP 56, the second device is the

subscriber PC 58, the second link is the link via the secondary network 202 from the

content server 52 to the PC 58, and the third link is the link between the subscriber PC

and the ISP). It would have been obvious to one skilled in the art at the time of the

invention to use the structure of Burns in the system of Voit. The motivation would be to

afford supplemental bandwidth for the delivery of content (Burns, column 12, lines 6-7).

Regarding claims 31, 43, and 55, the second user communication device is

further configured to establish the third link with the first user communication device

responsive to the reply message is disclosed in column 6, lines 63-65 (when the bandwidth for the call is granted, the client device connects to the ITG).

Regarding claims 33 and 45, the third link comprises a wire line link is disclosed in figure 1 of Voit.

Regarding claims 34 and 46, the third link comprises a wireless link is missing from Voit. However, Pasternak discloses in figure 1 a wireless network. It would have been obvious to one skilled in the art at the time of the invention to have the third link be wireless. The motivation would be to use a common, convenient type of connection.

Regarding claims 35 and 47, the first user communication device is further configured to: determine the available bandwidth of the first link and indicate the available bandwidth to the second user communication device is disclosed in column 5, lines 35-43 (the ITG lets the ISP know what bandwidth resources it has available, and notifies the client device via the ISP).

Regarding claims 36 and 48, the first user communication device is further configured to: determine the available bandwidth of the first link and indicate the available bandwidth to the service provider in Voit, column 5, lines 35-38.

Regarding claims 37 and 49, the first user communication device is further configured to generate a link sharing contract for the available bandwidth of the first link that specifies a type of link access to the first link is disclosed in column 5, lines 63-65 (the ITG negotiates a billing algorithm with the client at the time of connection).

Regarding claims 40 and 52, the service provider is configured to bill the second

user communication device based on the link sharing contract is disclosed in column 6,

lines 18-21.

3.   Claims 3, 15, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Voit (6157648) in view of Burns in further view of Becker.

Regarding claims 3, 15, and 27, the first link and the second link comprise Digital

Subscriber Line (DSL) service links is missing from Voit. However, user of digital

subscriber lines in a network is disclosed in Becker, column 16, lines 5-6. It would have

been obvious to one skilled in the art at the time of the invention to use DSL lines in the

system of Voit. The motivation would be to use a common type of connection.

4.   Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Voit (6157648) in view of Burns in further view of Yoshihura.

Regarding claims 9 and 21, the link access comprises an interruptible access to

the first link is missing from Voit. However, Yoshihura discloses in column 5, lines 56-

57, an interruptible connection. It would have been obvious to one skilled in the art at

the time of the invention to offer an interruptible connection in the system of Voit. The

motivation would be to have a lower QoS to offer to client devices if bandwidth

requirements necessitated it.

5.   Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Voit (6157648) in view of Burns in further view of Bodnar.

Regarding claims 10 and 22, the link access comprises a non-interruptible

access to the first link is missing from Voit. However, Bodnar discloses in column 5,

lines 61-62, a non-interruptible connection. It would have been obvious to one skilled in the art at the time of the invention to offer a non-interruptible connection in the system of Voit. The motivation would be to have a higher QoS to offer to client devices.

6.   Claims 12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Burns in further view of Voit (6289010).

Regarding claims 12 and 24, the service provider is configured to bill the first user communication device based on the link sharing contract is missing from Voit (6157648). However, Voit (6289010) discloses in column 2, lines 2-4, a gateway that has bandwidth resources that it sells to customers. It logically follows that the gateway must get its bandwidth from an ISP, which would bill the gateway for the bandwidth. It would have been obvious to one skilled in the art at the time of the invention to bill the gateway for bandwidth based on the link sharing contract. The motivation would be to allow the gateway to use resources belonging to other companies.

7.   Claims 32 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Burns in further view of Pasternak and Becker.

Regarding claims 32 and 44, the first link and the second link comprise Digital Subscriber Line (DSL) service links is missing from Voit. However, user of digital subscriber lines in a network is disclosed in Becker, column 16, lines 5-6. It would have been obvious to one skilled in the art at the time of the invention to use DSL lines in the system of Voit. The motivation would be to use a common type of connection.

8.   Claims 32 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Burns in further view of Pasternak and Yoshihura.

Regarding claims 38 and 50, the link access comprises an interruptible access to

the first link is missing from Voit. However, Yoshihura discloses in column 5, lines 56-

57, an interruptible connection. It would have been obvious to one skilled in the art at

the time of the invention to offer an interruptible connection in the system of Voit. The

motivation would be to have a lower QoS to offer to client devices if bandwidth

requirements necessitated it.

9.   Claims 32 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Voit (6157648) in view of Burns in further view of Pasternak and Bodnar.

Regarding claims 39 and 51, the link access comprises a non-interruptible

access to the first link is missing from Voit. However, Bodnar discloses in column 5,

lines 61-62, a non-interruptible connection. It would have been obvious to one skilled in

the art at the time of the invention to offer a non-interruptible connection in the system of

Voit. The motivation would be to have a higher QoS to offer to client devices.

10.   Claims 32 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Voit (6157648) in view of Burns in further view of Pasternak and Voit (6289010).

Regarding claims 41 and 53, the service provider is configured to bill the first

user communication device based on the link sharing contract is missing from Voit

(6157648). However, Voit (6289010) discloses in column 2, lines 2-4, a gateway that

has bandwidth resources that it sells to customers. It logically follows that the gateway

must get its bandwidth from an ISP, which would bill the gateway for the bandwidth. It

would have been obvious to one skilled in the art at the time of the invention to bill the

gateway for bandwidth based on the link sharing contract. The motivation would be to allow the gateway to use resources belonging to other companies.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLD .
1/30/2006

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600